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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/735,708

12/16/2003

Masahiro Naiki

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EXAMINER

MOORE, MARGARET G

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/735,708	<b>Applicant(s)</b> NAIKI ET AL.	
	<b>Examiner</b> Margaret G. Moore	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 to 18 is/are pending in the application.
- 4a) Of the above claim(s) 1 to 7, 14 to 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8 to 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Applicants' reply filed 2/27/08 has been entered and considered. Applicants correctly note that the Rosenfeld reference teaches cyanate compounds rather than polyvalent isocyanate compounds. The Examiner apologizes for this oversight. While Rosenfeld shows an example that uses a diisocyanate (Example 16C) this specific example uses an epoxy resin in an amount much greater than that claimed. In fact, the amount of epoxy resin in general is much higher in the teachings of Rosenfeld than that claimed. This, combined with the fact that diisocyanates are taught to give unsatisfactory properties (column 7, line 47) teaches away from the claimed invention. In view of this the Examiner updated her search and has found the following new reference. As such this action cannot be made final.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8 to 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-012664 (herein '664), as interpreted by the English language translation (machine generated, attached).

Please note that a better English language translation has been ordered by the Examiner.

'664 teaches a method of making a polyimide siloxane that is used for an electrical insulating film. The polyimide (which meets the claimed resin having a polysiloxane skeleton and a polar group) is described in paragraph 10. To 100 weight parts of polyimide are added, as curing agents, an isocyanate and/or an epoxy resin, a solvent and a filler. See paragraph 30. Paragraph 35 teaches that the epoxy resin has an equivalent weight of from 100 to about 1000, anticipating the epoxy compounds claimed. Most preferably, the combined amount of epoxy resin and diisocyanate is from 2 to 30 wt parts per 100 parts polyimide (paragraph 36).

From this one having ordinary skill in the art would have found a combination of epoxy resin and diisocyanate in an amount of up to 30 parts per 100 parts polyimide to have been obvious. For instance, see the example in paragraph 53. This includes 6 grams of an epoxy resin having an epoxy equivalent weight of approximately 210. From this one having ordinary skill in the art would have found the addition of up to 24 parts by weight of a diisocyanate to have been obvious. This renders obvious the instant claims.

In addition to this specific example, the teachings in '664 in general render obvious the instant claims. Note that when the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (i.e. does not require undue experimentation).

The polyimide described in paragraphs 10 and on meets claim 10. See also the polyimide prepared in paragraph 50. The composition in paragraph 53 contains a catalyst and a filler, meeting claims 11 and 12. Paragraph 45 teaches a temperature range meeting claim 13.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday and Wednesday to Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Margaret G. Moore/  
Primary Examiner, Art Unit 1796

mgm  
7/2/08